

Respons re: 09/842,225

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1-36 (Cancelled)

- B,*  
*Sub*  
*Amcl*
37. (Currently Amended) A method for directing any one of a plurality of input optical signals to any one of a plurality of output signal channels in an optical cross-connect switch, the method comprising detecting a Moiré interference pattern and determining therefrom a position of at least one element in said switch, according to claim 126 wherein said selected moveable output optical element is capable of at least one of: directing said one selected output optical signal channel so as to receive said one input optical communication signal and directing said one input optical communication signal so as to be received by said one selected output optical signal channel.
38. (Currently Amended) A method for directing any one of a plurality of input optical signals to any one of a plurality of output signal channels in an optical cross-connect switch, the method comprising detecting a Moiré interference pattern and determining therefrom a position of according to claim 126 wherein the selected moveable output optical element comprises at least one of: a receiving end of said one the selected output optical signal channel and a transmitting end of an a selected input signal optical channel associated with said one the input optical communication signal.
39. (Currently Amended) (Once Amended) A method of establishing optical communication in an optical cross-connect switch between a first optical fiber and a second optical fiber selected from a plurality of optical fibers, said method comprising detecting a Moiré interference pattern and determining therefrom a position of according to claim 126 wherein the selected moveable output optical element comprises at least one of: (a) an



Sub  
C1 end  
B1  
Sent

Response re: 09/842,225

end of said a first optical fiber ~~associated with the selected output optical channel;~~ (b) an end of said a second optical fiber, ~~the second optical fiber associated with a selected input optical channel that emitted the input optical communication signal;~~ and (c) an optical element operative to influence an optical path of the ~~input optical communication signal~~ between said first and second optical fibers; and (d) a plurality of optical elements operative to influence an optical path between said first and second optical fibers.

40-42 (Cancelled)

Sub  
C2

43. (Currently Amended) An optical fiber/cross-connect A switch comprising first and second groups of optical fiber switching units, disposed in optically opposing relation, each of the switching units in one of said first and second groups further comprising:

- (a) an optical fiber operative to conduct optical signals; and
- (b) a position encoder operative to detect a Moiré interference pattern and determine therefrom according to claim 84 wherein each position encoder is operative to determine, from the corresponding output control signal, a position of at least one of: (i) an end of said an optical fiber corresponding to the associated output optical channel; and (ii) an optical element operative to influence an optical path of optical communications signals associated with said fiber; and (iii) a plurality of optical elements operative to influence an optical path of optical signals associated with said signal emitted from or coupled into the fiber.

44-155 (Cancelled)